

Title (en)
PHOTO-CURING HOLLOW STRUCTURE

Title (de)
LICHTHÄRTENDE HOHLKONSTRUKTION

Title (fr)
STRUCTURE CREUSE PHOTODURCISSABLE

Publication
EP 1416107 B1 20100127 (EN)

Application
EP 02741415 A 20020705

Priority
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• JP 2001208091 A 20010709

Abstract (en)
[origin: EP1416107A1] Photo-curable hollow structure comprises inner bag layer allowing fluid to be force-fed therein, substrate layer impregnated with photo-curable resin overlaid on bag, and light permeable covering layer overlaid on substrate. Substrate layer contains fibre reinforced layer impregnated with photo-curable resin, and flowing resistant object is overlaid on reinforced layer to stop resin flowing. Photo-curable hollow structure comprises inner bag layer allowing fluid to be force-fed therein, substrate layer impregnated with photo-curable resin overlaid on inner bag layer, and light permeable covering layer overlaid on the substrate, wherein the structure can be wrapped and contained in a light shielding bag or case when not used, and when used, it is taken out of the casing, filled with liquid to expand, and the substrate is cured by irradiating with sun light or artificial light, wherein the substrate layer contains a fibre reinforced layer impregnated with photo-curable resins, and a flowing resistant object is overlaid on the fibre reinforced layer to stop the flowing of the resin. Independent claims are also included for: (1) a similar structure wherein the flowing resistant object is located along the longitudinal direction of the substrate; (2) a similar structure wherein the substrate also contains a partially cured product together with the fibre reinforced layer; (3) a similar structure wherein fibres with high heat conductivity is mixed in the fibre reinforced layer; (4) a similar structure wherein the inner bag is formed into a transparent film by irradiation; and (5) a curing method of the hollow product.

IPC 8 full level
C08J 5/24 (2006.01); **E04H 15/20** (2006.01); **B29C 35/08** (2006.01); **B29C 49/00** (2006.01); **B29C 69/02** (2006.01); **B29C 70/08** (2006.01); **B29C 70/42** (2006.01); **B29C 70/44** (2006.01); **B29C 70/54** (2006.01); **B29C 71/04** (2006.01); **B29D 22/00** (2006.01); **B29D 22/02** (2006.01); **B32B 5/28** (2006.01); **E04H 15/44** (2006.01); **B29L 12/00** (2006.01); **B29L 22/00** (2006.01)

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